

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A strained silicon carbon alloy MOSFET structure, comprising:

a substrate;

a graded SiGe layer on the substrate;

a relaxed buffer layer on the graded SiGe layer;

a strained silicon carbon alloy layer on the relaxed buffer layer acting as a channel;

a gate dielectric layer in contact with ~~on~~ the strained silicon carbon alloy layer;

a gate electrode on the gate dielectric layer; and

a source region and a drain region on the substrate opposite and adjacent to the gate electrode.

2. (Original) The structure of claim 1, wherein the relaxed buffer layer comprises Si-Ge-C alloy, Si, Ge or other combinations of at least two semiconductor materials.

3. (Original) The structure of claim 1, wherein the gate dielectric layer comprises HfO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub>, Al<sub>2</sub>O<sub>3</sub>, or any high dielectric constant (high k) dielectric material.

4. (Original) The structure of claim 1, wherein the MOSFET is a NMOS or PMOS.

5. (Cancelled)

6. (Currently Amended) The structure of claim 1, wherein the gate electrode is comprises polysilicon gate electrode and poly-SiGe.

7. (Cancelled)

8. (Original) The structure of claim 1, wherein the substrate comprises n-type and p-type doped Ge, III-V group semiconductor, or silicon-on-insulator (SOI).

9-16. (Cancelled)